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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/926,838	12/28/2001	Tetsuo Kusumoto	011771	6413

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EXAMINER

WU, SHEAN CHIU

ART UNIT PAPER NUMBER

1756

DATE MAILED: 07/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/926,838

Applicant(s)

KUSUMOTO ET AL.

Examiner

Shean C Wu

Art Unit

1756

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☒ Claim(s) 15 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3 & 7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claims 1 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. The group " $C\equiv C$ " in linking groups La-Ld is vague. The correct group should be a $-C\equiv C-$.
- b. The ring C being a phenylene in the provisos is vague because the ring C is tetrahydronaphthalene. The notation "C" should be ring --E--.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-2, 5-6, 8-12, 14, 16-18 and 21-24 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 06-279321.

The reference discloses that tetrahydronaphthalene derivatives having low viscosity, a small refractive index, physical and chemical stability and compatibility with other liquid crystal compounds show the stable nematic phase and are useful as materials to improve properties of liquid crystal compositions, e.g., to raise the N-I point. See the compound in Example 5 on page 13. The reference anticipates the claimed invention.

4. Claims 1, 3-4, 7-12, 14, 16-18 and 21-24 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 06-256284.

The reference discloses that tetrahydronaphthalene derivatives having a highly stable physically and chemically and shows stable nematic phase, whose dielectric isotropy is relatively large and is compatible with many other liquid crystal compounds. See the compound in Example 5 on page 13 or page 15. The reference anticipates the claimed invention.

5. Claims 1-2, 4, 7-14, 16-18 and 21-24 are rejected under 35 U.S.C. 102(a)/(b) as being anticipated by US 6,491,989 or WO 99/23047.

The references disclose that tetrahydronaphthalene derivatives having a fluorine atom attached to core structure. New compounds are useful for liquid crystal mixtures with an improved profile of properties, especially e.g. to shift the dielectric anisotropy of such mixtures to higher negative values. The compounds have a wide range of applications, especially in ferroelectric LC mixtures for devices operated in the inverse mode. See the compounds Ii-Ij and Is-It on col. 42 and 43. The reference anticipates the claimed invention.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 06-279321, JP 06-256284, US 6,491,989 or WO 99/23047.

The references differ from the claimed invention in that the claimed composition is used in the active matrix driving display device. Because it is well known that the liquid crystal compositions having better liquid crystal properties such as the references cited above are suitable for active matrix display device, therefore, it would have been obvious to those skilled in the art to utilize the reference compositions in the active matrix display devices.

Allowable Subject Matter

8. Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shean C Wu whose telephone number is 703-308-3956. The examiner can normally be reached on Monday-Friday 9:30 -6:00.

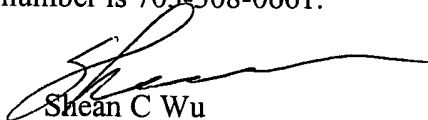
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 703-308-2464. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7718 for regular communications and 703-872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Shean C Wu
Primary Examiner
Art Unit 1756

SCW

June 30, 2003